wherein the plurality of regions communicate with each other, and the plurality of projections within each of the plurality of regions are formed in a regular pattern across a width of each of the plurality of regions, and are formed in the same regular pattern across a length of each of the plurality of regions.

25. (New) A fuel cell according to claim 24, wherein the width of each of the plurality of regions is narrower than the width of its immediately upstream region.

26. (New) The fuel cell according to claim 24, wherein a width of a turning passage between the end of each of the plurality of rib portions and their respective opposing peripheral walls of the separator is less than or equal to the width of the immediately upstream region.

27. (New) A fuel cell according to claim 26, wherein the width of each of the plurality of regions is narrower than the width of its immediately upstream region.

Please cancel claims 2, 6, 9, 13, 17 and 19 without prejudice to the subject matter contained therein.

REMARKS

Claims 1-18 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,998,055 to Kurita, *et al.* ("Kurita"). Claim 19 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,910,100 to Nakanishi, *et al.* ("Nakanishi"). Claims 3, 7, 10, 14 and 18 also stand rejected under 35 U.S.C. §112, first paragraph, as unsupported in the specification, and claims 2, 4, 6, 9, 13, 17 and 19 stand rejected under 35 U.S.C. §112, second paragraph, as indefinite for a variety of claim wording issues. Finally, claims 15 and 19 stand objected to for wording informalities.

The Applicants have carefully reviewed the April 23, 2002 Office Action, and respectfully submit the foregoing amendments and following remarks in response thereto. The Applicants have amended claims 1 and 4 to more clearly recite the fluid flow pattern within, and have added new claims 20-27 to further recite the patterns of projections contained within each fluid flow region and further recite the flow passages defined by rib projections. No new matter has been added; support for the passage arrangements in the new claims may be found, *inter alia*, in the original specification at pages 32-34. Claim 15 has

been amended to address the stated objections. Claims 2, 6, 9, 13, 17 and 19 have been canceled without prejudice to the subject matter contained therein.

In view of these amendments and the arguments set forth below, the Applicants respectfully request the pending rejections be reconsidered and claims 1, 3-5, 7-8, 10-12, 14-16, 18 and 20-27 be allowed.

1. The § 112 Rejection of Claims 3, 7, 10, 14 and 18 Should Be Withdrawn.

The Applicants respectfully traverse the § 112, first paragraph, rejection of claims 03(a) rejection of claims 3, 7, 10, 14 and 18 as unsupported by the specification on the grounds that adequate support is already present in the pending application.

Specifically, the April 23, 2002 Office Action notes claim 3's limitation "wherein the fluid includes a coolant," then states that it appears to the Examiner that the claimed plurality if regions and projections do not include coolant within the fluid passages. April 23, 2002 Office Action at 2. The Applicants respectfully submit that the application already contains specific references to coolant flow in these passages, and thus no amendments are necessary. The Applicants respectfully draw the Examiner's attention to the specification's identification of coolant flow, as shown in Fig. 5 (elements 30, coolant plates with passages) and as described at specification page 26, line 18-page 27, line 4. The Applicants therefore respectfully request the pending § 112, first paragraph, rejection of claims 3, 7, 10, 14 and 18 be withdrawn.

2. The § 112 Rejection of Claims 2, 4, 6, 9, 13, 17 and 19 Have Been Addressed.

The Applicants respectfully traverse the § 112, second paragraph, rejection of claims 2, 4, 6, 9, 13, 17 and 19 on the grounds that each of these rejections have been addressed as follows:

Claims 2, 6, 9, 13, 17 and 19: Claims 2, 6, 9, 13, 17 and 19 have been canceled.

Claim 4: Claim 4 has been amended to more clearly recite the flow within the plurality of flow regions (previously referred to as "the manifold").

3. The Claims, As Amended, Are Patentable Over Kurita.

The Applicants respectfully traverse the § 102(e) rejection of claims 1-18 as anticipated by Kurita on the grounds that this reference does not disclose all the features of amended claim 1.

As amended, claim 1 includes the limitation that "a gas supply inlet which connects the fluid passage and supplies a gas to the fluid passage therethrough, wherein the gas supply inlet is located *so that a gas flow between the gas supply inlet and the fluid passage is parallel to a gas flow in the fluid passage.*" *See, e.g.*, Fig. 6 (showing gas flowing from passage 305 directly onto surface 311 in the direction of flow across the joint body, *i.e.*, without having to immediately turn to begin flowing down the gas flow path).

Unlike the invention recited in amended claim 1, Kurita discloses a gas flow arrangement wherein gas entering region 16A from passage 12 is forced to make an immediate right-angle turn before it can proceed down the gas passages. This arrangement results in additional flow losses and permits uneven distribution of flow across the region 16A entrance (*e.g.*, as shown the in Fig. 1, low flow in the lower left portion of the entrance area as compared to the flow on the inside of the turn at the upper right corner of the entrance). Kurita thus does not disclose this feature of amended claim 1.

Because Kurita does not disclose all the features of claim 1, as amended, this reference does not anticipate amended claim 1 nor its dependent claims under § 102(e). The Applicants therefore respectfully request the pending § 102(e) rejection be withdrawn.[1]

4. <u>The Rejection of Claim 19 Under § 103(a) Is Moot</u>.

The Applicants have canceled claim 19, without prejudice to the subject matter contained therein, thereby rendering moot the pending § 103(a) rejection of this claim as unpatentable over Nakanishi. Accordingly, the Applicants have not included remarks addressing this rejection at this time.

<u>CONCLUSION</u>

In view of the foregoing remarks, it is respectfully submitted that the presently pending claims are in allowable form. The Applicants therefore earnestly solicit an early and favorable action on the merits and issuance of a Notice of Allowance for claims 1, 3-5, 7-8, 10-12, 14-16, 18 and 20.

The Examiner is invited to contact the undersigned at (202) 220-4232 to discuss any matter concerning this application.

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[1] The Applicants also respectfully submit that new claim 20 is patentable over Kurita. New claim 20 recites that the pattern of projections within each region is the same in both the width and length directions of each region. Kurita does not disclose or suggest this limitation, instead disclosing a number of regions in which the projections are continuous channels in the length direction but not in the width direction.

The Applicants do not believe that any additional fees are required in connection with this submission. Nonetheless, the Applicants authorize payment of any additional fees under 37 C.F.R. § 1.16 or § 1.17 or credit of any overpayment to Deposit Account No. 11-0600.

Respectfully submitted,

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MARKED-UP VERSION OF AMENDMENTS

IN THE CLAIMS:

1. (Once amended) A fuel cell comprising:

a joint body produced by interposing an electrolyte member between a pair of electrodes;

a separator which [the joint body which] holds the joint body;

a plurality of projections projecting from a bottom of the separator; [and]

a rib portion which divides an area where the projections project into a plurality of regions and forms a passage for fluid which flow through the separator, wherein the plurality of regions communicate with each other; and

a gas supply inlet which connects the fluid passage and supplies a gas to the fluid passage therethrough, wherein the gas supply inlet is located so that a gas flow between the gas supply inlet and the fluid passage is parallel to a gas flow in the fluid passage.

4. (Once amended) A fuel cell according to claim 1, wherein a direction of the gas flow in the fluid passage in at least [of the portion of the manifold is bent] one of the plurality of regions differs from a direction of the gas flow in a second one of the plurality of regions.

15. (Once amended) A fuel cell according to claim 1, wherein the number of projections arranged in each of the regions is different.